UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,834	09/30/2003	Brian Scott Hallisey	200208211-1	2530

22879 7590 02/26/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400	**EXAMINER** VUU, HENRY	

ART UNIT	PAPER NUMBER
2179	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/673,834	HALLISEY ET AL.
	Examiner	Art Unit	
	Henry Vuu	2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.,
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 November 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1 – 8, 11 – 16, 19 – 23, 26 – 32, 35, and 36 are rejected under 35

U.S.C. 102(e) as being anticipated by Benhase et al. (Pub No. 2004/0243616).

As to independent claim 1, Benhase et al, teaches:

A method of generating a graphical portion of a graphical user interface

(GUI) (user interface – see e.g., para [0006]), the graphical portion (interface display

400 – see e.g., para. [0037]; i.e., the graphical portion 400 can be visually separated by

the first display region 410 and second display region 420) concerning aspects of a

storage domain (storage resources – see e.g., para. [0036]), the method comprising:

illustrating (interface display 400 – see e.g., para. [0037]) a tree hierarchy (tree – see

e.g., para. [0037]) and a table portion (see e.g., Fig. 4 and para. [0037], lines 5 – 6; i.e.,

second display region 420); including, on the tree hierarchy (tree – see e.g., para.

[0037]), a node (System A Root – see e.g., Fig. 3 – 8 and para. [0037]) at a first level

(root node – see e.g., Fig. 3 – 8 and para. [0037]; i.e., the first level node corresponds to

"System A Root" which is defined at the top of the hierarchy) corresponding to a set of

at least two file systems (Server A and Server B – see e.g., Fig. 3 – 8 and para. [0037])

that are members of the storage domain (storage resources – see e.g., para. [0037]);

including, on the tree hierarchy (tree – see e.g., para. [0037]), nodes at a second level

reporting to the first-level node (Server A and Server B – see e.g., Fig. 3 – 8 and para.

[0037]; i.e., "Server A" and "Server B" both report to the first level node indicated as

"System A Root"), each second-level node (Server A and Server B – see e.g., Fig. 3 – 8

and para. [0037]) corresponding to a member of the set of files systems to which the

first node corresponds (see e.g., Fig. 1 – 8 and para. [0037]); including, on the tree

hierarchy (tree – see e.g., para. [0037]), nodes at a third level (logical subsystem LSS

A, LSS B, and LSS C - see e.g., Fig. 1 – 8 and para. [0037]), each third level node

corresponding to a storage consumer (see e.g., para. [0025] and para. [0030]; i.e., as

an example of storage consumers, users are able to set up storage resources such as

LSS A, LSS B, and LSS C for copying data, wherein the action of copying corresponds

to the consumption of storage) having allocated storage capacity (see e.g., para. [0029],

lines 23 – 28; i.e., LSS are a group of logical devices, such as units or sectors of a

recording medium in a RAID array, that are divided into sectors of one or more disks for

allocated storage capacity) on the storage domain (see e.g., para. [0036]); and

including, on the table portion (see e.g., Fig. 4; i.e., second display region 420), the

allocated storage capacity used by the storage consumer (see e.g., Fig. 4 and

para.[0038], lines 11 – 13; sectors are set up for each storage resource, wherein each

sector is allocated storage).

As to independent claim 8, Benhase et al. teaches:

A method of generating a graphical portion of a graphical user interface (GUI) (user

interface – see e.g., para [0006]), the method comprising: illustrating a tree-table

(interface display 400 – see e.g., Fig. 3 – 8 and para. [0037]) having a tree hierarchy

(first display region 410 – see e.g., Fig. 3 – 8 and para. [0037]) portion and a table

portion (second display region 420 – see e.g., Fig. 3 – 8 and para. [0037]); including, on

the tree-hierarchy portion (tree – see e.g., para. [0037]), nodes corresponding to

storage consumers (see e.g., Fig. 4 – 8; i.e., storage consumers correspond to "Vol. 1"

through "Vol. 4") that are members having allocated storage capacity (see e.g., Fig. 4

and para. [0029], lines 23 – 28; i.e., LSS are a group of logical devices, such as units or

sectors of a recording medium in a RAID array, that are divided into sectors of one or

more disks for allocated storage capacity) on a storage domain (storage resources –

see e.g., para. [0036]); and including, on the table-portion (second display region 420 –

see e.g., Fig. 3 – 8), rows (rows – see e.g., Fig. 4 – 8 and para. [0037]; i.e., rows are

defined in the table portion of the GUI 420, which further corresponds to the tree

hierarchy) and one or more columns (columns – see e.g., Fig. 4 – 8 and para. [0037]),

the one-or-more columns (number of columns – see e.g., Fig. 4 – 8 and para. [0038])

each representing an attribute (see e.g., Fig. 4 – 8 and para. [0038], i.e., the columns

correspond to specific identifying attributes), respectively, regarding an allotment of

storage space (size column 434 – see e.g., Fig. 4- 8 and para. [0038]) to the respective

storage consumers (see e.g., Fig. 4 – 8; i.e., storage consumers correspond to "Vol. 1"

through "Vol. 4"), and each row (rows – see e.g., Fig. 4 – 8 and para. [0037]) being

aligned with one of the nodes (see e.g., Fig. 4 – 8 i.e., the nodes of "Vol. 1" through

"Vol. 4" are displayed under "Resource Identifier" column 432 of the second display

region 420, in which each row is aligned with one of the nodes), respectively, and

including cells corresponding to the one or more columns (see e.g., Fig. 4 – 8, wherein

the intersection of a row and column corresponds to a cell of a specific column

attribute).

As to independent claim 15, Benhase et al. teaches:

A method of generating a graphical portion of a graphical user interface (GUI) (user

interface – see e.g., para [0006]), the method comprising: illustrating a tree-table

(interface display 400 – see e.g., Fig. 3 – 8 and para. [0037]) having a tree hierarchy

portion (first display region 410 – see e.g., Fig. 3 – 8 and para. [0037]) and a table

portion (second display region 420 – see e.g., Fig. 3 – 8 and para. [0037]); including, on

the tree-hierarchy portion (first display region 410 – see e.g., Fig. 3 – 8 and para.

[0037]), a node at a first level corresponding to one file system (Server A and Server B

– see e.g., Fig. 3 – 8 and para. [0037]) in a storage domain (storage resources – see

e.g., para. [0036]); including, at a second level on the tree-hierarchy portion (see e.g.,

Fig. 3 – 8), at least one of a node belonging to a first node-category ("System A Root" –

see e.g., Fig. 4 – 8) corresponding to a set of instances of storage-consumers (see e.g.,

Fig. 4 – 8, i.e., Server A and Sever B are instances of storage consumers) that are

allocated storage space on the storage domain (see e.g., para. [0029], lines 23 – 28;

i.e., LSS are a group of logical devices, such as units or sectors of a recording medium

in a RAID array, that are divided into sectors of one or more disks for allocated storage

capacity), and a node belonging to a second node-category (Server A and Server B –

see e.g., Fig. 4 – 8) corresponding to a set of groups of storage-consumers ("LSS a",

"LSS B" and "LSS C" – see e.g., Fig. 4 – 8) that are allocated storage space on the

storage domain (see e.g., para. [0029], lines 23 – 28; i.e., LSS are a group of logical

devices, such as units or sectors of a recording medium in a RAID array, that are

divided into sectors of one or more disks for allocated storage capacity), each second-

level node reporting to the first-level node (see e.g., Fig. 4 – 8); and including, on the

table-portion, rows and one or more columns, the one-or-more columns (number of

columns – see e.g., Fig. 4 – 8 and para. [0038]) each representing an attribute (see

e.g., Fig. 4 – 8 and para. [0038], i.e., the columns correspond to specific identifying

attributes), respectively, regarding an allotment of storage space (size column 434 –

see e.g., Fig. 4- 8 and para. [0038]) to the respective storage consumers (see e.g., Fig.

4 – 8; i.e., storage consumers correspond to "Vol. 1" through "Vol. 4"), and the rows

(rows – see e.g., Fig. 4 – 8 and para. [0037]; i.e., rows are defined in the table portion of

the GUI 420, which further corresponds to the tree hierarchy) being aligned (see e.g.,

Fig 4 – 8, i.e.,node System A Root node is aligned with respect to row 450 and Server

A/Sever B node is aligned with respect to row and column 462) with the first-category

(System A Root – see e.g., Fig. 4 – 8) and second-category (Server A and Server B –

see e.g., Fig. 4 – 8) nodes, respectively, and including cells corresponding to the one or

more columns (see e.g., Fig. 4 – 8, wherein the intersection of a row and column

corresponds to a cell of a specific column attribute).

As to independent claim 29, Benhase et al. teaches:

An apparatus for managing aspects of a storage domain (storage resources – see e.g.,

para. [0025]), the apparatus comprising: a host operatively connected to components

of the storage domain (see e.g., Fig. 1); and manager means for running on the host

(elements 120 and 130 – see e.g., Fig. 1 and para. [0024]) and for managing aspects

of the storage domain (storage resources – see e.g., para. [0025]) in part by producing

a graphical user interface (GUI) (interface 150 – para. [0025]); and generation means

for generating a graphical portion of the GUI (see e.g., para. [0005] and [0025], i.e., the

user interface provides the generation of a tree hierarchy and corresponding tree table

by running a software), the generation means being operable to portray, in the

graphical portion (interface display 400 – see e.g., Fig. 4 – 8), a tree hierarchy (tree –

see e.g., para. [0036]) and a table portion (see e.g., Fig. 4 and para. [0037], lines 5 – 6;

i.e., second display region 420), portray, on the tree hierarchy, a node at a first level

(System A Root – see e.g., Fig. 4 – 8) corresponding to a set of at least two file

systems (Sever A and Server B – see e.g., Fig. 4 – 8) that are members of the storage

domain (storage resources – see e.g., para. [0024]), portray, on the tree hierarchy,

nodes at a second level reporting to the first-level node, each second-level node

corresponding to a member of the set of files systems to which the first node

corresponds (see e.g., Fig. 4 – 8, i.e., "Server A" and "Server B" reports to "System A

Root"), portray, on the tree hierarchy (tree – see e.g., para. [0037]), nodes at a third

level (logical subsystem LSS A, LSS B, and LSS C - see e.g., Fig. 1 – 8 and para.

[0037]), each third-level node corresponding to a storage consumer (see e.g., para.

[0025] and para. [0030]; i.e., as an example of storage consumers, users are able to

set up storage resources such as LSS A, LSS B, and LSS C for copying data, wherein

the action of copying corresponds to the consumption of storage) having allocated

storage capacity (see e.g., para. [0029], lines 23 – 28; i.e., LSS are a group of logical

devices, such as units or sectors of a recording medium in a RAID array, that are

divided into sectors of one or more disks for allocated storage capacity) on the storage

domain (see e.g., para. [0036]), and portray, on the table portion (see e.g., Fig. 4; i.e.,

second display region 420), the allocated storage capacity used by the storage

consumer (see e.g., Fig. 4 and para.[0038], lines 11 – 13; sectors are set up for each

storage resource, wherein each sector is allocated storage).

As to independent claim 32, Benhase et al. teaches:

An apparatus for managing aspects of a storage domain (storage resources – see e.g.,

para. [0025]), the apparatus comprising: a host operatively connected to components

of the storage domain (see e.g., Fig. 1); and manager means for running on the host

(elements 120 and 130 – see e.g., Fig. 1 and para. [0024]) and for managing aspects

of the storage domain (storage resources – see e.g., para. [0025]) in part by producing

a graphical user interface (GUI) (interface 150 – para. [0025]); and generation means

for generating a graphical portion of the GUI (see e.g., para. [0005] and [0025], i.e., the

user interface provides the generation of a tree hierarchy and corresponding tree table

by running a software), the generation means being operable to portray, in the

graphical portion (interface display 400 – see e.g., Fig. 4 – 8), a tree-table (interface

display 400 – see e.g., Fig. 4 – 8) having a tree hierarchy portion (tree – see e.g., para.

[0036]) and a table portion (second display region 420 – see e.g., Fig. 4 – 8), portray,

on the tree-hierarchy portion (tree – see e.g., para. [0036]), nodes corresponding to

storage consumers (see e.g., Fig. 4 – 8; i.e., storage consumers correspond to "Vol. 1"

through "Vol. 4") that are members having allocated storage capacity (see e.g., Fig. 4

and para. [0029], lines 23 – 28; i.e., LSS are a group of logical devices, such as units

or sectors of a recording medium in a RAID array, that are divided into sectors of one

or more disks for allocated storage capacity) on a storage domain (storage resources –

see e.g., para. [0024]), and portray, on the table-portion (second display region 420 –

see e.g., Fig. 4 – 8), rows (rows – see e.g., Fig. 4 – 8 and para. [0037]; i.e., rows are

defined in the table portion of the GUI 420, which further corresponds to the tree

hierarchy) and one or more columns (columns – see e.g., Fig. 4 – 8 and para. [0037]),

the one-or-more columns each representing an attribute (see e.g., Fig. 4 – 8 and para.

[0038], i.e., the columns correspond to specific identifying attributes), respectively,

regarding an allotment of storage space to the respective storage consumers (size

column 434 – see e.g., Fig. 4- 8 and para. [0038]), and each row being aligned with

one of the nodes (see e.g., Fig. 4 – 8 i.e., the nodes of "Vol. 1" through "Vol. 4" are

displayed under "Resource Identifier" column 432 of the second display region 420, in

which each row is aligned with one of the nodes), respectively, and including cells

corresponding to the one or more columns (see e.g., Fig. 4 – 8, wherein the

intersection of a row and column corresponds to a cell of a specific column attribute).

As to dependent claim 2, Banhase et al teaches:

The method of claim 1, wherein each second-level node being a parent to at least one

of the third-level nodes (see e.g., Fig. 3 – 8 and para. [0036] – [0037]; i.e., "LSS A",

"LSS B", and "LSS C" all report to the second node "Server A", wherein "Server A"

node is collapsible and expandable to view related child nodes).

As to dependent claim 3, Benhase et al. teaches:

The method of claim 1, wherein each third-level node (logical subsystem LSS A, LSS

B, and LSS C – see e.g., Fig. 1 – 8 and para. [0037]) corresponds to one of an

individual consumer or group of consumers (see e.g., Fig. 4, para. [0029], lines 23 – 28

and para. [0030]; i.e., LSS is considered an individual entity of a storage resource or a

group of logical volumes within a logical device in a RAID array, wherein both are used

to read or write data) using storage capacity on the storage domain (storage resources

– see e.g., para. [0036]).

As to dependent claim 4, Benhase et al. teaches:

The method of claim 1, further comprising: including, on the tree hierarchy (tree – see

e.g., para. [0037]), nodes at a fourth level (see e.g., Fig. 3 – 8 and para. [0037], i.e., the

nodes "Vol. 1" through "Vol. 4" are defined as the fourth level nodes); wherein each

third-level node is a parent to at least one fourth-level node (see e.g., Fig. 3 – 8, i.e.,

"LSS B" is a third level node that is a parent node to "Vol. 1" through "Vol. 4"); each

third-level node corresponds to one of a set of instances of storage-consumers and a

set of groups of storage-consumers (see e.g., Fig. 4 – 8, i.e., "Vol. 1" correspond to

one instance of storage consumer, whereas "Vol. 1" through "Vol. 4" corresponds to a

group of storage consumers), each group corresponding to instances of storage consumers, respectively; and each fourth-level node correspond to a member of the set to which the parent third-level node corresponds (see e.g., Fig. 4 – 8).

As to dependent claim 5, Benhase et al. teaches:

The method of claim 4, wherein two or more fourth-level nodes (see e.g., Fig. 4 – 7, i.e., the two fourth level nodes corresponds to "Vol. 1" through "Vol. 4") correspond to the same entity (see e.g., Fig. 4 – 7 and para. [0051], i.e., wherein "Vol. 1" listed under "Resource Identifier" column 432 and "1" listed under "Volume" column 466 correspond to the same entity) yet and report indirectly to two or more second-level nodes representing respective file systems (see e.g., Fig. 4 – 7, i.e., as illustrated in the respective figures, "Server A" and "Server B" are assigned as second level nodes as illustrated in the first display region 410. "Vol. 1" listed under column 432 which reports to second level "Server A", and "1" listed under column 466 correspond to a volume, which report to a different second level node, illustrated as "Server B" shown on "Resource Identifier" column 462).

As to dependent claim 6, Benhase et al. teaches:

The method of claim 1, wherein the storage domain (storage resources – see e.g., para. [0036]) includes a network-attached storage (NAS) device (see e.g., Fig. 4 – 8 and para. [0024]) on which the at-least-two different (see e.g., para. 0024]; i.e., Server A and Server B are two different file systems, wherein server 100 could be mirrored to another server 110 that is at a remote site) file systems are mounted (Server A and Server B – see e.g., Fig. 3 – 8 and para. [0037]).

As to dependent claim 7, Benhase et al. teaches:

The method of claim 1, further comprising: changing a number of rows in the table

portion (see e.g., Fig. 4 and para. [0038], lines 8 – 13; i.e., when LSS B 412 is selected

in the first display region, resource identifiers are displayed in second display region

420, wherein if LSS C is selected after, resource identifiers of LSS C are displayed in

the second display region 420, which changes the rows in the second display region

since LSS B and LSS C have different amounts of volumes) in response to expanding

or collapsing the nodes at the second and third levels in order to show a row

corresponding to each node currently displayed in the tree hierarchy (see e.g., para.

[0037], lines 21 – 26 and para. [0038], lines 8 – 13; i.e., in order to view associated

volumes within an LSS storage resource, the user must click on the desired LSS or

SERVER, wherein clicking the desired LSS or SERVER is associated with expanding,

collapsing, and displaying the storage resources in second display region 420).

As to dependent claim 11, Benhase et al. teaches:

The method of claim 8, further comprising: illustrating (user interface – see e.g., para.

[0005]), in response to a user request (sort/filter command – see e.g., para. [0042], i.e.,

the user customizes interface 400 by using a pointing device to click on a command to

invoke sorting/filtering of the table), a sortable table corresponding to the table-portion

(see e.g., para. [0042]).

As to dependent claim 12, Benhase et al. teaches:

The method of claim 11, wherein the sortable table (second display region 420 – see

e.g., Fig. 4 – 5, i.e., wherein the table residing in the second display region 420 is

sortable) includes all of the rows (see e.g., Fig. 4 – 5, i.e., Fig. 5 shows the sorted

display of Fig. 4, wherein all the rows in Fig. 4 are still present in the sorted table of Fig.

5) and the one-or-more columns of the table-portion (see e.g., Fig. 4 – 5, i.e., the

columns present in Fig. 4's table are still present in Fig. 5's sorted table).

As to dependent claim 13, Benhase et al. teaches:

The method of claim 11, further comprising: toggling (toggle – see e.g., para. [0042])

between the sortable table and the tree-table (see e.g., Fig. 4 – 5 and para. [0042], i.e.,

in regards to the tree-table corresponding to Fig. 4, the values of the "Resource

Identifier" 432 are ordered in ascending order, wherein Fig. 5 corresponds to the

sorting of "Resource Identifier" 432's values in descending order).

As to dependent claim 14, Benhase et al. teaches:

The method of claim 8, further comprising: changing a number of rows in the table

portion (see e.g., Fig. 4 and para. [0038], lines 8 – 13; i.e., when LSS B 412 is selected

in the first display region, resource identifiers are displayed in second display region

420, wherein if LSS C is selected after, resource identifiers of LSS C are displayed in

the second display region 420, which changes the rows in the second display region

since LSS B and LSS C have different amounts of volumes) in response to expanding

or collapsing the nodes corresponding to the storage consumers in order to show a row

corresponding to each node currently displayed in the tree hierarchy (see e.g., para.

[0037], lines 21 – 26 and para. [0038], lines 8 – 13; i.e., in order to view associated

volumes within an LSS storage resource, the user must click on the desired LSS or

SERVER, wherein clicking the desired LSS or SERVER is associated with expanding,

collapsing, and displaying the storage resources in second display region 420).

As to dependent claim 16, Benhase et al. teaches:

The method of claim 15, further comprising: including, on the tree-hierarchy portion

(tree – see e.g., para. [0036]), nodes at a third level (see e.g., Fig. 4 – 8, i.e., "LSS A",

"LSS B" and "LSS C" are nodes at a third level) that report to the first-category

(System A Root – see e.g., Fig. 4 – 8) and second-category nodes (Server A and

Server B – see e.g., Fig. 4 – 8) respectively, each third-level node corresponding to a

member of the set to which the parent first-category or second-category node

corresponds (see e.g., Fig. 4 – 8, i.e., "LSS A", "LSS B" and "LSS C" are nodes at a

third level which report to "Server A" and "Server B" at the second level, which report to

the parent node of all nodes, "System A Root"), respectively; and including, on the

table-portion (second display region 420 – see e.g., Fig. 4 – 8), rows that align with the

third-level nodes (see e.g., Fig. 4 – 8, i.e., wherein third level node "LSS B" is aligned

with row 454), respectively, and include cells corresponding to the one or more

columns (number of columns – see e.g., Fig. 4 – 8 and para. [0038]).

As to independent claim 19, this claim is a product-by-process claim, where the

applicant intends for the product itself to depend on the process of making it.

Additionally, this claim is directed toward a product defined by a process identically

claimed in claim 1. Therefore, this claim is analyzed as previously discussed with

respect to claim 1 above.

As to dependent claim 20, this claim is a product-by-process claim, where the applicant intends for the product itself to depend on the process of making it. Additionally, this claim is directed toward a product defined by a process identically claimed in claim 2. Therefore, this claim is analyzed as previously discussed with respect to claim 2 above.

As to dependent claim 21, this claim is a product-by-process claim, where the applicant intends for the product itself to depend on the process of making it. Additionally, this claim is directed toward a product defined by a process identically claimed in claim 6. Therefore, this claim is analyzed as previously discussed with respect to claim 6 above.

As to dependent claim 22, this claim is a product-by-process claim, where the applicant intends for the product itself to depend on the process of making it. Additionally, this claim is directed toward a product defined by a process identically claimed in claim 7. Therefore, this claim is analyzed as previously discussed with respect to claim 7 above.

As to independent claim 23, this claim is a product-by-process claim, where the applicant intends for the product itself to depend on the process of making it. Additionally, this claim is directed toward a product defined by a process identically claimed in claim 8. Therefore, this claim is analyzed as previously discussed with respect to claim 8 above.

As to dependent claim 26, this claim is a product-by-process claim, where the applicant intends for the product itself to depend on the process of making it.

Additionally, this claim is directed toward a product defined by a process identically claimed in claim 11. Therefore, this claim is analyzed as previously discussed with respect to claim 11 above.

As to dependent claim 27, this claim is a product-by-process claim, where the applicant intends for the product itself to depend on the process of making it. Additionally, this claim is directed toward a product defined by a process identically claimed in claim 13. Therefore, this claim is analyzed as previously discussed with respect to claim 13 above.

As to dependent claim 28, this claim is a product-by-process claim, where the applicant intends for the product itself to depend on the process of making it. Additionally, this claim is directed toward a product defined by a process identically claimed in claim 14. Therefore, this claim is analyzed as previously discussed with respect to claim 14 above.

As to dependent claim 30, Benhase et al. teaches:

The apparatus of claim 29, wherein each second-level node being a parent to at least one of the third-level nodes (see e.g., Fig. 3 – 8 and para. [0036] – [0037]; i.e., "LSS A", "LSS B", and "LSS C" all report to the second node "Server A", wherein "Server A" node is collapsible and expandable to view related child nodes).

As to dependent claim 31, Benhace et al. teaches:

The apparatus of claim 29, wherein the generation means is further operable to change a number of rows in the table portion (see e.g., Fig. 4 and para. [0038], lines 8 – 13; i.e., when LSS B 412 is selected in the first display region, resource identifiers are

displayed in second display region 420, wherein if LSS C is selected after, resource

identifiers of LSS C are displayed in the second display region 420, which changes the

rows in the second display region since LSS B and LSS C have different amounts of

volumes) in response to expanding or collapsing the nodes at the second and third

levels in order to show a row corresponding to each node currently displayed in the

tree hierarchy (see e.g., para. [0037], lines 21 – 26 and para. [0038], lines 8 – 13; i.e.,

in order to view associated volumes within an LSS storage resource, the user must

click on the desired LSS or SERVER, wherein clicking the desired LSS or SERVER is

associated with expanding, collapsing, and displaying the storage resources in second

display region 420).

As to dependent claim 35, Benhase et al. teaches:

The apparatus of claim 32, wherein the generation means is further operable to portray

in the graphical portion (interface display 400 – see e.g., para. [0037]; i.e., the

graphical portion 400 can be visually separated by the first display region 410 and

second display region 420), in response to a user request (sort/filter command – see

e.g., para. [0042], i.e., the user customizes interface 400 by using a pointing device to

click on a command to invoke sorting/filtering of the table), a sortable table (second

display region 420 – see e.g., Fig. 4 – 5, i.e., wherein the table residing in the second

display region 420 is sortable) corresponding to the table-portion (second display

region 420 – see e.g., Fig. 3 – 8).

As to dependent claim 36, Benhase et al. teaches:

The apparatus of claim 35, wherein the generation means is further operable to toggle

(toggle – see e.g., para. [0042]) between the sortable table and the tree-table (see e.g.,

Fig. 4 – 5 and para. [0042], i.e., in regards to the tree-table corresponding to Fig. 4, the

values of the "Resource Identifier" 432 are ordered in ascending order, wherein Fig. 5

corresponds to the sorting of "Resource Identifier" 432 in descending order).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 9, 10, 17, 18, 24, 25, 33 and 34 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Benhase et al. (Pub No. 2004/0243616) in view of Byrnes et al.

(Patent No. 6,832,248).

As to dependent claim 9, Benhase et al. teaches a graphical user interface (GUI)

(user interface – see e.g., para [0006]) illustrating a tree table (interface display 400 –

see e.g., Fig. 3 – 8 and para. [0037]) having a tree hierarchy portion (first display

region 410 – see e.g., Fig. 3 – 8 and para. [0037]) and a table portion (second display

region 420 – see e.g., Fig. 3 – 8 and para. [0037]), which includes nodes

corresponding to storage consumers (see e.g., Fig. 4 – 8; i.e., storage consumers correspond to "Vol. 1" through "Vol. 4") that are members of a storage domain (storage resources – see e.g., para. [0036]) of the tree hierarchy. Additionally, Benhase et al. teaches including on the table portion, rows and one or more columns (see e.g., Fig. 4 – 8), wherein the one or more columns represent an attribute (see e.g., Fig. 4 – 8 and para. [0038], i.e., the columns correspond to specific identifying attributes) regarding allotment of storage space (size column 434 – see e.g., Fig. 4- 8 and para. [0038]) and consumption attributes (see e.g., Fig. 4 – 8). Furthermore, Benhase et al. teaches the alignment of nodes and rows (see e.g., Fig. (4 – 8), which includes cells corresponding to one or more columns (see e.g., Fig. 4 – 8) but does not teach a soft and hard limit on storage spaces. Byrnes et al. teaches, a quota limit that can correspond to a soft and hard limit, in which the hard limit cannot be exceeded under any circumstances, and the soft limit can be exceeded for a predefined period of time (see e.g., column 9, lines 11 – 59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the graphical user interface and attributes of Benhase et al. with the soft and hard limit attributes of Byrnes et al. because a warning message can indicate to the user that he/she has exceeded the soft limit and is allowed a grace period for a predefined period of time (see e.g., column 9, lines 11 – 59).

As to dependent claim 24, claim 24 differs from claim 9 only in that claim 24 is an apparatus claim using a machine-readable instruction (computer code – see e.g., para.

[0025]) to perform the steps recited above, whereas claim 9 is a method claim.

Therefore, claim 24 is analyzed as previously discussed with respect to claim 9 above.

As to dependent claim 33, claim 33 differs from claim 9 only in that claim 33 is an

apparatus claim using an apparatus (workstation – see e.g., para. [0025]) to perform

the steps recited above, whereas claim 9 is a method claim. Therefore, claim 24 is

analyzed as previously discussed with respect to claim 9 above.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benhase

et al. (Pub No. 2004/0243616) in view of Byrnes et al. (Patent No. 6,832,248), and

further in view of Kuchinsky et al. (Pub No. 2005/0039123).

As to dependent claim 10, this claim is analyzed as previously discussed with

respect to the above discussion. Benhase et al. teaches a graphical user interface

(GUI) (user interface – see e.g., para [0006]) illustrating a tree table (interface display

400 – see e.g., Fig. 3 – 8 and para. [0037]) having a tree hierarchy portion (first display

region 410 – see e.g., Fig. 3 – 8 and para. [0037]) and a table portion (second display

region 420 – see e.g., Fig. 3 – 8 and para. [0037]). Additionally, Benhase et al. teaches

including on the table portion, rows and one or more columns (see e.g., Fig. 4 – 8),

wherein the one or more columns represent an attribute (see e.g., Fig. 4 – 8 and para.

[0038], i.e., the columns correspond to specific identifying attributes) regarding

allotment of storage space (size column 434 – see e.g., Fig. 4- 8 and para. [0038]) and

consumption attributes (see e.g., Fig. 4 – 8). Byrnes et al. teaches a quota limit that

corresponds to a soft and hard limit, in which the hard limit cannot be exceeded under

any circumstances, wherein the soft limit is able to be exceeded for a predefined period

of time (see e.g., column 9, lines 11 – 59). Both Benhase et al. and Byrnes et al.

teaches their respective limitations but do not teach the first attribute being a soft limit.

Kuchinsky et al. teaches the capability of rearranging rows and columns within a table

(see e.g., para. [0144]). Therefore, it would have been obvious to one of ordinary skill

in the art at the time the invention was made to incorporate the graphical user interface

of illustrating a tree table as taught by Benhase et al. to the soft limit, hard limit, and

predefined grace period of Byrnes et al. as modified by Kuchinsky et al. so to position

the row, columns and cells of the table in ways that accentuates similarities and

correlations within the table (see e.g., para. [0144]).

As to dependent claim 25, claim 25 differs from claim 10 only in that claim 25 is

an apparatus claim using a machine-readable instruction (computer code – see e.g.,

para. [0025]) to perform the steps recited above, whereas claim 10 is a method claim.

Therefore, claim 25 is analyzed as previously discussed with respect to claim 10

above.

As to dependent claim 34, claim 34 differs from claim 10 only in that claim 34 is

an apparatus claim using an apparatus (workstation – see e.g., para. [0025]) to

perform the steps recited above, whereas claim 10 is a method claim. Therefore, claim

34 is analyzed as previously discussed with respect to claim 10 above.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benhase

et al. (Pub No. 2004/0243616) in view of Martinez et al. (Patent No. 6,271,846).

As to dependent claim 17, Benhase et al. teaches a graphical user interface (user interface – see e.g., para [0006]) including a tree hierarchy portion (first display region 410 – see e.g., Fig. 3 – 8 and para. [0037]) with file systems (Server A and Server B – see e.g., Fig. 3 – 8 and para. [0037]) and storage domains (storage resources – see e.g., para. [0036]) but does not teach two first level nodes corresponding to at least two file systems with a node at the zeroith level, which is a parent to each of the first level nodes and represents all instances of the file system. Martinez et al. teaches two first level nodes ("Production" and "Sample" – see e.g., Fig. 4C; i.e., "Production" and "Sample" represents the two first level nodes) with a zeroith node ("Databases" – see e.g., Fig. 4C; i.e., node "Databases" is the parent node at the zeroith level, in which "Sample" and "Production" report to). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the graphical user interface of illustrating a tree table as taught by Benhase et al. with the two first level node and a zeroith node of Martinez et al. because the reanchoring branches of Martinez et al. provides optimum management and organization of members within a directory tree (see e.g., column 4, lines 63 – 67).

As to dependent claim 18, this claim is analyzed as previously discussed with respect to calim 17 above. Benhase et al. teaches a third level node (LSS A – see e.g., Fig. 4 – 8) can report indirectly to two or more second level nodes (see e.g., Fig. 4 – 8, i.e., wherein "LSS A" reports to "Server A" shown in the first display region 410, and "LSS A" indirectly also reports to "Server B" shows in "Other Resources" column 460).

Response to Arguments

Applicant's arguments filed 11/30/2006 have been fully considered but they are

not persuasive.

At page 13 of the remarks, applicant argues, "***Benhase teaches that the nodes***

in the first display region of the tree are storage resources in the storage system,

not storage consumers..." as recited in claim 1 and claim 8. However, storage

consumers is interpreted as devices that consumes data, wherein Benhase et al.

teaches storage consumers, such as logical volumes in a RAID array divided into

sectors (see e.g., para. [0029], lines 23 – 28; logical volumes in a RAID array are

recording mediums). Storage resources such as logical volumes in a RAID array are

recording mediums divided into sectors for copying data from a plurality of storage

resources (see e.g., para. [0025]), wherein RAID arrays is a performance enhancing

method for storing data in different places on multiple hard disks. Furthermore, the

nodes described in the first display region of Benhase et al.'s tree is described to

represent various storage resources, such as logical storage resources and disks (i.e.,

hard-drive), wherein disks are a form of storage mediums that copies data into its

storage, which can also be represented as a storage consumer. Therefore, RAID arrays

and it's associated hard disk sectors are used for copying data, which constitutes a

RAID array as being a storage consumer.

At page 13 of the remarks, applicant argues, "***the table portion includes the***

allocated storage capacity used by the storage consumer" as recited in claim 1.

However, Benhase et al. teaches the table portion (see e.g., Fig. 4- i.e., second display

region 420) includes allocated storage capacity used by the consumer (see e.g., para

[0029], lines 23 – 28; i.e., units or sectors of a disk), wherein each sector has a fixed

size (see e.g., Fig. 4; i.e., column 434). Each volume has a plurality of sectors, and

each sector includes allocated storage capacity for each copy progress (see e.g., Fig, 4;

i.e., column 439), wherein the copy progress column displays the allocated storage

capacity used by each sector.

At page 14 of the remarks, applicant argues, " *the table portion includes an*

allotment of storage space to the respective storage consumer" as recited in claim

8. Benhase et al. clearly teaches an allotment of storage space (see e.g., Fig, 4 and

para. [0029], lines 23 – 28; i.e., units may include sectors of one or more disks), wherein

each RAID array represents a storage consumer with units or sectors for copying data.

The RAID array are divided into different unit and sector sizes set aside for copying data

and further displayed on a table (see e.g., Fig. 4; i.e., column 434).

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Prior art US Patent No. 6,966,033 can be applicable and

considered pertinent art to applicant's disclosure.

Prior art disclosed by Grasser et al. teaches a method and apparatus for

graphically managing resources within a system using a graphical user interface and a

directory tree.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art Pub No. 2005/0066134 can be applicable and considered as pertinent art to applicant's disclosure.

Prior art disclosed by Tormasov et al. teaches limit quotas on a computer storage device such as disk quota management with soft and hard limit quotas.
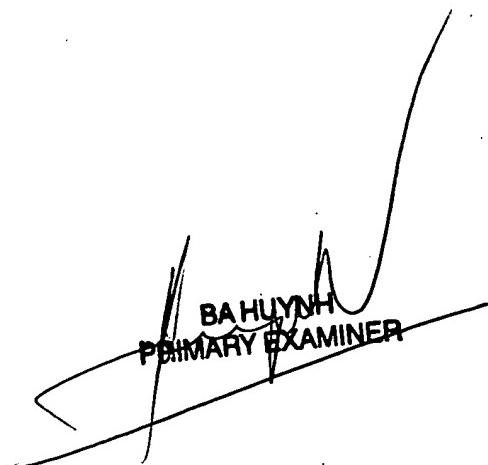
Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Vuu whose telephone number is (571) 270-1048. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571) 272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner's Name:
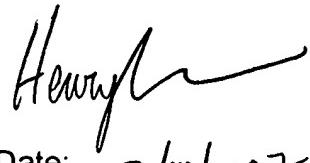
Date: 2/20/2007

BA HUYNH
PRIMARY EXAMINER